IN THE CLAIMS

1. (Currently amended) An I.V. flush syringe assembly comprising:

a syringe barrel having an elongated body defining a chamber for retaining fluid, an open proximal end, a distal end and a frusto-conically shaped tip extending from said distal end having a tip passageway therethrough in fluid communication with said chamber, said chamber having an inside diameter of at least 13.5 mm (0.53 inch), said chamber having a distal end defined by a distal wall through which said passageway passes, the length of said chamber being no more than 57 mm (2.25 inches);

a stopper in fluid-tight engagement inside said barrel;

an elongated rigid plunger rod defining a longitudinal axis and extending proximally from said stopper through said open proximal end of said barrel, a flange at a proximal end of said plunger rod;

a tip cap releasably connected to said tip for sealing said passageway; and

flush solution in said chamber in an amount less than 10 ml, ~~the ratio of the inside diameter of said chamber to the passageway being selected such that the fluid pressure~~ wherein the fluid pressure in the flush solution injected through said passageway is less than 40 psi when a ten pound force is applied to the plunger rod.

2. (Previously presented) The syringe assembly of claim 1 wherein the length of said chamber is in the range of 38.1 mm (1.5 inches) to 44.5 mm (1.75 inches).

3. (Original) The syringe assembly of claim 1 wherein said chamber contains no more than 3.5 ml of flush solution.

4. (Original) The syringe assembly of claim 1 wherein said flush solution is selected from the group consisting of saline flush solution and heparin lock flush solution.

5. (Original) The syringe assembly of claim 1 wherein said syringe assembly is contained in a package which provides a tamper evident barrier surrounding the syringe assembly.

6. (Original) The syringe assembly of claim 1 wherein said syringe assembly is contained in a package which provides a sterile barrier surrounding the syringe assembly.

7. (Original) The syringe assembly of claim 1 further including volume measuring indicia on said barrel.

8. (Original) The syringe assembly of claim 7 wherein said volume measuring indicia indicates the stopper position for a chamber volume of about 3 ml.

9. (Original) The syringe assembly of claim 1 wherein said stopper is made of material selected from the group of natural rubber, synthetic rubber, thermoplastic elastomers and combinations thereof.

10. (Currently amended) The syringe assembly of Claim 1 wherein said inside diameter of said chamber is ~~14.43 mm (0.568 inch)~~ approximately 14.5 mm (0.57 inch).

11. (Previously presented) The syringe assembly of Claim 1 wherein said plunger rod flange is smaller than said open proximal end of said barrel when measured in a direction perpendicular to said longitudinal axis so that said plunger rod flange does not extend radially beyond said barrel.

12. (Previously presented) The syringe assembly of Claim 11 wherein said stopper and said plunger rod are dimensioned so that when said plunger rod flange contacts said proximal end of said barrel there is a space between at least a portion of the distal end of said stopper and said distal wall of said barrel.

13. (Previously presented) The syringe assembly of Claim 1 wherein said plunger rod includes a threaded extension projecting from a distal end of said plunger rod and said stopper defines a threaded recess which engages with said threaded extension of said plunger rod.

14. (Withdrawn) A method of flushing a catheter comprising the steps of:

(a) determining the optimal volume of flush solution to be used for the flushing procedure;

(b) providing a prefilled flush syringe assembly, said assembly including a syringe barrel having an elongated body defining a chamber for retaining fluid, an open proximal end, a distal end and a frusto-conically shaped tip extending from said distal end having a tip passageway therethrough in fluid communication with said chamber, said chamber having an inside diameter of at least 13.5 mm (0.53 inch), said chamber

having a distal end defined by a distal wall through which said tip passageway passes, the length of said chamber being no more than 57 mm (2.25 inches); a stopper in fluid-tight engagement inside said barrel; an elongated plunger rod defining a longitudinal axis and extending proximally from said stopper through said open proximal end of said syringe barrel, a flange at a proximal end of said plunger rod; a tip cap releasably connected to said tip for sealing said passageway; wherein said chamber contains the optimal volume of flush solution;

(c) providing a catheter having a proximal end, a distal end and a passageway therethrough and a housing having a hollow interior in fluid communication with said passageway, said housing having a pierceable septum for allowing fluid communication with said hollow interior;

(d) providing a needle assembly including a cannula having a proximal end, a distal end, and a lumen therethrough, a hub having an open proximal end containing a cavity and a distal end attached to said proximal end of said cannula so that said lumen is in fluid communication with said cavity;

(e) placing said distal end of said catheter in a blood vessel;

(f) removing said tip cap from said syringe and attaching said needle assembly to said syringe so that said frusto-conically shaped tip of said barrel is in said cavity of said hub;

(g) piercing said septum with said distal end of said needle so that said lumen is in fluid communication with said hollow interior of said housing;

(h) applying force to said plunger rod to move said plunger rod in a distal direction with respect to said barrel so that said flush solution in said chamber flows

through said lumen of said cannula into said hollow chamber of said housing and through said passageway of said catheter such that the fluid pressure is no more than 40 psi; and

(i) withdrawing said cannula from said septum.

15. (Withdrawn) The method of Claim 14 wherein said septum is pre-slit and said distal end of said cannula includes a blunt tip.

16. (Withdrawn) The method of Claim 14 wherein said flush solution is selected from the group consisting of saline flush solution and heparin lock flush solution.

17. (Withdrawn) The method of Claim 14 wherein the optimal volume of said flush solution in said chamber is no more than 3.3 ml.

18. (Withdrawn) The method of Claim 13 wherein the optimal volume of said flush solution in said chamber is no more than 4 ml.

19. (Withdrawn) The method of Claim 13 wherein the length of said chamber is in the range of 38.1 mm (1.5 inches) to 44.5 mm (1.75 inches).

20. (Withdrawn) A method of flushing a catheter comprising the steps of:

(a) determining the optimal volume of flush solution to be used for the flushing procedure;

(b) providing a prefilled flush syringe assembly, said assembly including a syringe barrel having an elongated body defining a chamber for retaining fluid, an open proximal end, a distal end and a frusto-conically shaped tip extending from said distal end having a tip passageway therethrough in fluid communication with said chamber, said chamber having an inside diameter of at least 13.5 mm (0.53 inch), said chamber having a distal end defined by a distal wall through which said tip passageway passes, the length of said chamber being no more than 57 mm (2.25 inches); a stopper in fluid-tight engagement inside said barrel; an elongated plunger rod defining a longitudinal axis and extending proximally from said stopper through said open proximal end of said syringe barrel, a flange at a proximal end of said plunger rod; a tip cap releasably connected to said tip for sealing said passageway; wherein said chamber contains the optimal volume of flush solution;

(c) providing a catheter having a proximal end, a distal end and a passageway therethrough and a housing having a hollow interior in fluid communication with said passageway, said housing having an access valve for allowing fluid communication with said hollow interior;

(d) placing said distal end of said catheter in a blood vessel;

(e) removing said tip cap from said syringe;

(f) engaging said frusto-conically shaped tip to said access valve so that said tip passageway is in fluid communication with said hollow interior of said housing;

(g) applying force to said plunger rod to move said plunger rod in a distal direction with respect to said barrel so that said flush solution in said chamber flows through said passageway into said hollow chamber of said housing and through said

passageway of said catheter such that the fluid pressure in said chamber is less than 40 psi; and

(h) disengaging said tip from said access valve.

21. (Withdrawn) The method of Claim 20 wherein said flush solution is selected from the group consisting of saline flush solution and heparin lock flush solution.

22. (Withdrawn) The method of Claim 20 wherein the optimal volume of said flush solution in said chamber is no more than 3.3ml.

23. (Withdrawn) The method of Claim 20 wherein the optimal volume of said flush in said chamber is no more than 5 ml.

24. (Withdrawn) The method of Claim 20 wherein the length of said chamber is in the range of 38.1 mm (1.5 inches) to 44.5 mm (1.75 inches).

25. (Currently amended) A catheter flush kit comprising:

a first syringe assembly and a second syringe assembly, each of said syringe assemblies including a syringe barrel having an elongated body defining a chamber for retaining fluid, an open proximal end, a distal end and a frusto-conically shaped tip extending from said distal end having a tip passageway therethrough in fluid communication with said chamber, said chamber having an inside diameter of at least about 13.5 mm (0.53 inch), said chamber having a distal end defined by a distal wall

through which said passageway passes; a stopper in fluid-tight engagement inside said barrel; an elongated rigid plunger rod defining a longitudinal axis and extending proximally from said stopper through said open proximal end of said barrel, a flange at a proximal end of said plunger rod; and a tip cap releasably connected to said tip for sealing said passageway;

said first syringe assembly having a chamber length in the range of ~~is in the range of~~ 38.1 mm (1.5 inches) to 44.5 mm (1.75 inches) and including no more than about 3.3 ml of a first flush solution in said chamber, wherein the ~~ratio of the inside diameter of said chamber to the diameter of said passageway is such that the~~ fluid pressure in the flush solution injected through said passageway is less than 40 psi when a ten pound force is applied to the plunger rod;

said second syringe assembly having no more than about 10ml of a second flush solution in said chamber; and

said first and second flush solutions being selected from the group consisting of saline flush solution and heparin lock solution.

26. (Previously presented) The kit of Claim 25 wherein said syringe assemblies are contained in a package which provides a tamper evident barrier surrounding said syringe assemblies.

27. (Previously presented) The kit of Claim 26 wherein said plunger rod flange in at least one of said syringe assemblies is shaped and positioned to limit the distal motion of said plunger rod in said barrel by contacting said proximal end of said barrel.